

A1

21. (New) The gasoline composition according to claim 17, wherein X is (B1) or (B3) and wherein (B3) is a group represented by formula (3a) in which  $R^{14}$  is a  $C_2 - C_3$  alkylene group.--

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### REMARKS

Claims 13-21 are presently pending in the application.

Specifically, claim 1 has been written as new claim 13 to positively recite that the gasoline additive comprises a nitrogen-containing compound; the optional polybutenylamine compound has been deleted. The claimed nitrogen-containing compound has a formula that is derived from formula (1a) as originally claimed and which has support in the specification. Particularly, claim 13 recites a compound having a formula derived from formula (1a) in which  $c = 0$ ,  $d = 1$ , and  $e = 2$ , which are taught at least at page 21, lines 2-5. Furthermore,  $b = 1$ , as taught at least at page 20, line 5, and  $R^6$  is  $CH_2CH_2$ , in agreement with the teaching at page 17, 3<sup>rd</sup> line from the bottom that  $R^6$  may be a  $C_1 - C_{10}$  hydrocarbon group. Additional minor changes for clarity have also been made to claim 13. Finally, the Group A from which  $R^6$  could be selected has been deleted from claim 13. Claim 10 recites a gasoline composition comprising a nitrogen-containing compound which is identical to that recited in claim 13, and thus the definition of this compound has been similarly amended. Finally, claim 11 has been written as new claim 18 to change "said compound (A1)" to "the nitrogen-containing compound" to correctly depend from claim 17.

Additionally, new claims 14-16 and 19-21 have been added. Each claim depends from claim 13 or claim 17 and merely narrows the definition of the nitrogen-containing compound in the gasoline additive or gasoline composition. Each narrow definition is clearly supported in the specification. For example, claims 14 and 19 recite that  $R^1 = \text{hydrogen}$  (as in

formula (31a) at page 61, line 13) or a C<sub>1</sub> – C<sub>12</sub> alkyl group (as in formula (33a) at page 63, line 8). No new matter has been added by these amendments.

**In the Office Action Summary of Paper No. 4, the Examiner acknowledges the claim for foreign priority under § 119, but notes that none of the certified copies of the priority documents had been received. However, such certified copies were filed on June 19, 2001 and were received by the PTO on June 21, 2001, as evidenced by the stamping of a return receipt postcard. Accordingly, a copy of the Transmittal of Priority Documents with a Certificate of Mailing dated June 19, 2001 and a copy of the return receipt postcard stamped June 21, 2001 are enclosed. Acknowledgement of the receipt of the priority documents by the Examiner is respectfully requested.**

*Rejections Under 35 U.S.C. § 112*

In Paper No. 4, the Examiner has rejected claims 2, 3, 5, 6 and 10 under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 2, 3, 5 and 6 have been canceled by this amendment and the rejection of these claims is thus rendered moot. Regarding claim 10, the Examiner argues that there is no “h” in formula (5a). However, the phrase reciting “h” has been deleted from claim 10 (new claim 17) by this Amendment. Consequently, reconsideration and withdrawal of the § 112 rejection are respectfully requested.

*Rejections Under 35 U.S.C. § 102(b), (e) or (a)*

The Examiner has rejected claims 1, 2, 3, 10 and 11 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,332,595 of Herbstman, *et al.* (“Herbstman”). Claims 1, 10 and 11 have been rejected under § 102(b) as being anticipated by U.S. Patent No. 5,348,560

of Mohr, *et al.* ("Mohr"). The Examiner has further rejected claims 1-3, 10 and 11 under § 102(e) as being anticipated by U.S. Patent No. 5,928,393 of Ishida, *et al.* ("Ishida"). Claims 1-3, 10 and 11 have also been rejected under § 102(b) as being anticipated by EP 0 819 753 ("EP '753"). Finally, the Examiner has rejected claims 1, 4-10 and 12 under § 102(a) as being anticipated by U.S. Patent No. 5,810,894 of Dever, *et al.* ("Dever"). These rejections are rendered moot by the cancellation of the original claims and substitution of new claims 13-21. Applicants respectfully traverse the Examiner's rejections and the arguments in support thereof, to the extent they may be applied to the new claims, for the reasons set forth below, and respectfully request reconsideration and withdrawal of the rejections.

*Rejection Under § 102(b) Based on Herbstman*

The Examiner argues that Herbstman teaches a gasoline detergent additive represented by the formula  $R-[O-CH_2-CH(CH_3)]_y-NH-(CH_2)_3-NH_2$ , wherein R is a hydrocarbyl radical having 8 to 18 carbon atoms, and y is 2 - 6. The Examiner argues that the claimed compound embraces the prior art compound when R<sup>1</sup> is hydrocarbon, R<sup>2</sup> - R<sup>4</sup> are H, b and d are 0, X is O and e is 2.

In the new claims, a compound is recited which contains an O-CH<sub>2</sub>CH<sub>2</sub>-N group. In contrast, the additive taught by Herbstman is based on an O-CH<sub>2</sub>-CH(CH<sub>3</sub>) moiety, and thus does not anticipate the claimed invention. Consequently, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under § 102(b) Based on Mohr

The Examiner argues that Mohr teaches a carbamate having the formula  $R^1-CH_2-NH-C(=O)O[R^2-O]_n-R^3$  wherein  $R^1$  is a polybutyl radical,  $R^2$  is a straight chain or branched  $C_2-C_6$  alkylene, and  $R^3$  is H when n is 1 - 4 or  $C_1-C_6$  alkyl when n is 0 - 4. The carbamates are allegedly used in fuels in amounts from 10-5000 ppm.

Claims 13 and 17 recite an additive or composition having a nitrogen-containing compound containing an  $O-CH_2CH_2-NX_2$  moiety. In contrast, the carbamate taught by Mohr contains the group  $O-C(=O)-N(H)-CH_2$ , which does not anticipate the claimed compound because it contains a carbonyl rather than an ethyl group bridging the oxygen and nitrogen atoms, and further does not contain two identical substituents equivalent to "X" on nitrogen. Mohr further does not teach or suggest compounds which do not contain the  $O-C=O$  group. Accordingly, reconsideration and withdrawal of the rejection based on Mohr are respectfully requested.

Rejection Under § 102(e) Based on Ishida And Under §102(b) Base on EP '753

The Examiner argues that Ishida teaches a fuel additive that allegedly embraces the additive of the instant claims, especially when Z of the claims is COO. The Examiner also contends that Ishida teaches the additives to be present in the fuel in an amount of 0.005 -10% by mass. The EP '753 reference is the corresponding European Patent Application to the Ishida patent, and allegedly also teaches a fuel additive which anticipates the claimed compound.

"Z" has been deleted from the claimed formula by this Amendment and the compound taught by Ishida and EP '753, which contains a  $O-(C=O)(O)(alkylene)-N$  moiety does not anticipate the claimed compound containing an  $O-CH_2CH_2-N$ -group. Furthermore, neither

Ishida nor EP '753 teaches or suggests a compound which does not contain the  $-(C=O)O$  group. Therefore, reconsideration and withdrawal of the rejections are respectfully requested.

*Rejection Under § 102(a) Based on Dever*

The Examiner argues that Dever teaches a fuel additive comprising an olefin monoamine having a molecular weight from about 400 to about 3,000. Dever allegedly teaches that the fuel contains from about 50 ppm to about 2000 ppm of the additive.

The new claims do not recite a polybutenylamine compound, and Dever does not teach or suggest the claimed nitrogen-containing compound. Accordingly, Dever does not anticipate the new claims and withdrawal of the rejection is respectfully requested.

In view of the preceding Amendments, it is respectfully submitted that the pending claims are in compliance with § 112. Based on the Amendments and Remarks, Applicants respectfully submit that the pending claims are patentably distinct from the prior art of record and in condition for allowance. A Notice of Allowance is respectfully requested.

Respectfully submitted,

**KATSUHIKO HAJI, ET AL.**

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(Date)

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Enclosures: Copy of Transmittal of Priority Documents with Certificate of

Mailing dated 6/19/01

Copy of Return Receipt Postcard Stamped 6/21/01